Response to Office Action Dated 03/03/2006 U.S. Patent Application Scrial No. 10/812,856

REMARKS

Claims 2-4 have been amended substantially to better conform them to U.S.P.T.O. practice. Claim 1 is directed to a nonelected invention, is withdrawn and not amended. Basis for amendment of Claim 2 is found, for example, in paragraphs [0001], [0005], [0008] and Figure 3. Basis for amendment of Claim 3 is found, for example, in paragraphs [0014], [0021] and Figure 1. Basis for amendment o Claim 4 is found, for example, in paragraphs [0001], [0005], [0007] and [0028].

Election

Applicant affirms the election of the invention of Group II, Claims 2-4, without traverse.

Claim Rejections 35 U.S.C. § 112

The term "resultant" in Claim 2 has been removed. The phrase "The carbon nanotubes" in line 1 of Claim 4 has been removed. The narrative nature of the claims has been corrected. Claim 1 is withdrawn and has not yet been amended.

Claim Rejections 35 U.S.C. § 103

Claims 2-4 have been rejected as obvious in view of Smalley et al. (U.S. Patent 6,813,714 B1). Smalley et al. relates to a method of making carbon nanotubes, as shown in Figs. 1 and 3, where tube 12, within which reactions take place, is neither used to seal or protect the nanotubes nor prevent reaction of the bundles.

Applicant has substantially amended Claim 2. The amended claim recites an assembly compressing the nanotube bundles sealed in a quartz sheath that has been axially extended (per Fig. 3c) wherein the sheath protects the bundles resisting their reaction.

These are claim limitations as the court stated in <u>In re Boe and Duke</u>, 184 U.S.P.Q. 38, 40 (1974-C.C.P.A.):

"This court has stated that all limitation must be considered and that it is error to ignore specific limitations distinguishing over the references. <u>In re Saether</u>, 181 U.S.P.Q. 36, 39 (1974 C.C.P.A.); <u>In re Glass</u>, 176 U.S.P.Q. 489, 491 (1973 C.C.P.A.)."

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Amended Claim 3 has additional limitations relating to the type data gathered in Fig. 1. Amended Claim 4 is directed to the outside diameter (O.D.) of the quartz sheath being less than about 0.1 mm, recognizing that before drawing and quenching the tube is about 5 mm O.D. (paragraph [0026]).

Smalley et al. does not recognize any advantage of sealing the highly electrically conductive carbon nanotubes in quartz. At the bottom of Column 3 and the top of Column 4, Smalley et al. lists examples of carbon nanotube use. Smalley et al. presents no evidence that resembles the sealed nanotube bundles of this invention.

Smalley et al.'s nanotube growth is based on the vapor transport of graphite vapor mixed with transition metal elements which let the graphite deposit on the metal substrate to form single wall nanotube, whereas the applicant's claimed invention starts with bundles of multi-wall nanotubes. The material is then vacuum-sealed in a quartz tube. When heated, the graphite bundle and quartz are drawn while they are red-hot at a high temperature between 900 and 1300°C, and subsequently quenched; the internal pressure of the quartz tube would give a squeezing pressure on the graphite bundles toward its radial direction.

Claim 2 contains further limitations in terms of tension not seen in Smalley et al. and Claim 3 contains further limitations in that the quartz stretch has an outside diameter less than about 0.1 mm. Both of these claims should be allowable.

Applicant respectfully submits that Smalley et al. does not teach or make obvious to one skilled in the art at the time of the invention the amended Claims 2-4.

Response to Office Action Dated 03/03/2006 U.S. Patent Application Serial No. 10/812,856

Summary

In review of the preceding amendments to and arguments, applicant respectfully submits that pending Claims 2-4 are in condition for allowance and requests consideration and allowance of these claims. For the examiner's convenience, a copy of <u>In re Boe and Duke</u>, cited previously, is included.

Respectfully submitted,

08840 Patent Trademark Office Daniel P. Cillo, Esq. Attorney for Applicants Registration No. 25,108 (412) 566-5903 B4 USPQ

resulting Jubricated

and the

:.In re Boe and Duke

action, and same meaning. Procter & Gamble Co. v. Conway, 57 CCPA 865, 419 F.2d 1332, 164 USPQ 301 (1970).

products. While third-party registrations are to be considered, they are of little help and do not control our determination of whether the products. Appellee has also introduced 38 third-party registrations, which include the word SPICE, for the purpose of showing that applied to spices, seasonings, and other food products. While third-party registrations are marks are so similar that they are likely to cause confusion, mistake, or deception. Clairol [3] Appellee has referred to a number of red party registrations which, appellee subtractions that appellant does not possess SPICE is commonly used in registered marks exclusive rights to the representation of a tree, as applied to spices, seasonings, or other food Sird E S

lands in Indonesia where the climate is semi-tropical, while SPICE TREE serves to create ous spices are grown. We do not find such an argument persuasive. Suffice to say, we note that it overlooks the fact that appellant uses its mark SPICE ISLANDS in connection with its mercial impression created by each mark is significantly different. Thus, it is contended significantly different. Thus, it is contended that SPICE ISLANDS connotes a group of isthe impression of a fanciful tree on which vari-Incorporated v. Roux Labotatories, supra-[4] Appellee further argues that the com-

For the foregoing reasons, the decision of the Trademark Trial and Appeal Board is reree mark.

versed.

Court of Customs and Patent Appeals In re Boe and Duke

Decided Dec. 5, 1974 No. 74-555

1. Patentability - Invention - In gen-(1921,501) PATENTS eral

practice in Patent Office - Rejections (554.7) guishing over the references. 2. Pleading and

sidering obviousness under 35 U.S.C. 103; il

All limitations must be considered in conis error to ignore specific limitations distinUse of applicants' admission that specific a new ground of rejection where filaments are disclosed in reference. filaments are well known does not constitute

patent monopoly - Process, product and apparatus (\$51.613) Ŷ matter Subject 3. Patentability

nevertheless, this is a significant factor to In re Neugebauer, 141 USPQ 205, held that unobviousness of final product was not determinative of unobviousness of method; consider in viewing subject matter as whole.

4, Words and phrases (\$70.)

Statement in reference that textile oils result in satisfactory subricating finish for certain polymers "only" when employed with certain metal soaps does not exclude use of other ingredients in finish inasmuch as reference also states that oils cannot be used to subricate filaments because of harmful effect of such oils, thus compelling an interpretation that oils may be used satisfactorily provided certain metal soaps are included in fin-

Boe and Duke, Release Finish for Yarns Containing Segmented Elastomers, rejection of chaims I to 9 of application affirmed. Particular patents-Yarn

Appeal from Board of Appeals of the Patent

Application for patent of Norman W. Boe de Bascum H. Duke, Serial No. 112,766, filed Feb. 4, 1971; Patent Office Group 162. From decision rejecting claims 1 to 9, applicants appeal. Affirmed.

KELLY O. CORLEY, Pensacola, Fla., for appel-

OSEPH F. NAKABURA (ROBERT D. EDMONDS of counsel) for Commissioner of Patents. lants.

MILLER, Associate Judge, and Rich, BALDWIN, LANE, and Before MARKEY, Chief Judges.

on the weight of said filament:

MILLER, Judge.

Palent Office Board of Appeals affirming the examiner's rejection under 35 U.S.C. 103 of No. 112,766, filed February 4, 1971, for "Re-lease Finish for Yarns Containing Segmented This is an appeal from the decision of the the claims in application serial Elastomers." We affirm. claims 1-9—all

ing tackiness of freshly spun filaments, composed at least partly of a segmented clastomeric polymer, by applying an aqueous, The invention involves a process for reduc-INVENTION

Segmented elastomerie polymers consist of segments of a high-melting, crystalline polymer, such as

mented elastomeric polymers are not mentioned in Barrett, but the aqueous emul-sion is disclosed to be suitable for a wide variety of synthetic polymeric substances, ered the same as that of appellants. The ten-sion problem caused by tackiness and the segceded for purposes of this appeal that the aqueous emulsion of Barrell may be considion during drawing by minimizing friction between the filaments. Appellants have conincluding polyurethanes, hydrocarbon pol mers, and polyesters, which can be used spun filaments to prevent excessive yarn making segmented clastomeric polymers. been tried on segmented polymers but have not proved to be fully satisfactory. For exmers, and tale as a finishing agent has manufacturing disadvantages such as causing dust menis to cohere and for the yarn to adhere to other surfaces, resulting in erratic running tensions. Various lubricating finishes have properties of the segmented elastomeric polythere is a greater tendency (compared to relatively inclastic filaments) for adjacent filaample, textile oils are harmful to the physical known that filaments of segmented classomeric polymers are quive tacky upon extrusion, and Inbricating finish emulsion to such filaments,

Yuk 3 discloses that the tackiness of segmented clastomeric polymers may be avoided by application of an anhydrous habricating finely applicative oils and certain finely-divided ish of textile oils and certain finely-divided soaps. Appellants rely heavily upon the following statement from Yuk (emphasis by ap-

hazards, Process claim 1 and product claim 6

are illustrative of appellants' invention:

1. A process for reducing tackiness in

freshly spun filaments at least partly com-

posed of a segmented elastomer, said

wax selected from the group consisting of paraffin waxes, microcrystalline (2) between 10 and 45% textile oil

Jubricant, and

sion in said emulsion; and

derly fashion.

waxes and polyethylene waxes.

(1) between 1 and 15% emulsifiable

b. applying to said filaments an aque-

a. forming said filaments.

ess comprising:

ous emulsion containing by weight:

sion problem causer by taxaming mented elastomeric polymers are not mented elastomeric polymers are not mented elastomeric polymers and be appeared to be suitable for a wide sion is disclosed to be suitable for a wide sion is disclosed to be suitable for a wide sion is disclosed to be suitable for a wide sion is discloses that the tackiness of seg. Yuk's discloses that the tackiness of seg. Proplant):

They discloses that the tackiness of seg. Yuk's distorted by application of an abydrone bubbreating fine pellant):

Rejection of an abydrone bubbreating fine scaps. Appellants rely heavily upon the folescopered that textile oils make in the discovered that textile oils when there is egmented copolymers only when there is segmented copolymers on the canning for examiner rely including polyurethanes, it would be obvious one of ordinary skill in the art to substitute the substitute of polymers for the substitute his bubbre in come of ordinary skill in the art to substitute the bubricating finish of Barrett for the lubricating finish of Barrett of the lubricating finish of Barrett et al. The claimed method of applying a lo of Yuk. The application serial of the second of Serial Product were novel, this would and obvious method of applying a lo of ordinary skill in the art to substitute the lubricating finish of Barrett et al. The claimed method of applying a lo of ordinary skill in the art to substitute the lubricating for the substitute and Street that the substitute the lubricating for the lubricating serial fursit as a suidenced by Barrett et al. The clai a. between 0.01 and 1.0% of an emulsi-. position, said composition comprising based least partially of a segmented elastomeric said filament having deposited polymer, said filament naving neposition thereon between 1 and 5% based on the weight of said filament of a lubricant com-6. A Jubricated filament composed at (3) sufficient emulsifier to maintain c. collecting said filaments in an orsaid wax and said textile oil in suspen-

aqueous, lubricating finish emulsion to freshly 띪 waxes, and polyethylene waxes, b. between 0.5 and 3.5% of a textile fiable wax selected from the group consisting of paraffin waxes, microcrystalline c, between 0.1 and 2.5% of an emulsi-

ploy a pulyurethane as the crystalline, high-melting

elastomeric polymers are spandex fibers which em-

melting, amorphous polymer, such as a polyester or hydrocarbon polymer. Illustrative of segmented

a polyurcihane, alternating with segments of a low-

Barrett 2 discloses a method of applying

PRIOR ART

oil; and

ber 10, 1963, on application serial No. 25,902, filed

polymer. 2 United States Patent 3,113,369,

In re Bne and Duke

controlling of obvious ness] of the method. See In re Neugebauer et al., 141 USPQ 205 and In re Jeroine J. Kanter, 158 USPQ and In re Jeroine J.

Barrett could not be applied to the segmented clastomeric polymer filaments of Yuk with the In agreeing with the examiner, the board merely adopted the reasons of the examiner as resultant reduction in tackiness of the treated its own and further stated that there was no reason to believe that the lubricating finish of filaments.

Process Claims

known filaments composed of a segmented classomeric polymer. CL In ce Schneider, 481 e. 2a 1350, [79 USPQ 46 (CCPA 1973); In re Wadlinger, 496 F.2d 1200, [81 USPQ 826 tions distinguishing over the references. In re Sacther, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Glass, 472 F.2d 1388, 176 USPQ 489 (CCPA 1973), However, we do not regard this as reversible error here, since Barreul does can be used to make the admittedly wellhydrocarbon polymers, and polyesters, which disclose filaments made from polyurethanes, partly of a segmented elastomeric polymer leaves us with a rejection which ignores a spestated that all limitations must be considered and that it is error to ignore specific limitamanipulative steps and a lubricating finish that are known, the examiner's failure to cite a reference showing filaments composed at least cific limitation of the claims. This court has [1] Although the claimed method involves

iness or purport to solve the problem.5 However, the tension problem caused by friction tomeric polymers) and Barrett, which does not refer to the tension problem caused by tack-The examiner's failure to cite Yuk leaves us with only admitted prior art (segmented elas-(CCPA 1974)

not regard use of appellants' admission that such filter and anents are "well known" to constitute a new ground of rejection. But see in re Hunter, 48 CCPA ground of rejection. But see in re Hunter, 48 CCPA ground of rejection. But see in re Hunter, 48 CCPA ground of rejection. But see in re Hunter, 822, 286 F.24 619, 128 USPQ 544 (1961).

[3] Thus, appellants product—a hubricated [3] Thus, appellants product—a hubricated flament composed at least partly of a segmented 12] 'Under the circumstances of this case, we do

of the method. Nevertheless, in is clear that this is a of the method. Nevertheless, in is clear that the significant to be considered in viewing "the subject matter as a whole... In re Naylor, 54 CCPA subject matter as a whole... In re Naylor, 54 CCPA 269 F.2d 765, 152 USPQ 106 (1966), See also 902, 369 F.2d 765, 152 USPQ 118PQ 250 (CCPA the examiner, which was deemed controlling in In re Kanter, 55 CCPA 1395, 399 F.2d 249, 158 USPQ 331 (1968), merely held that unobviousness of the fielastomeric polymer with reduced tackiners—can be considered novel. In re Neugebauer, 51 CCPA (138, 330 F.2d. 553, 141 USPQ 203 (1964), eited by nal product was not determinative of unobviousness

ler a solution to the tension problem caused by tackiness. Cl. In re Pye, 53 CCPA 877, 355 F.2d 641, 148 USPQ 426 (1966). with which Barrett is concerned is sufficiently analogous to suggest to one skilled in the art that the aqueous emulsion of Barrett would of-

Accordingly, we hold the process claims to be obvious over Barrett and admitted prior

Product Claims

ments may be derived from a polyester or a hydrocarbon polymer. In Barreit, a wide variety of polymers may be treated with the lubricating finish, including polyurethanes, hydro-carbon polymers, and polyesters. line segments may be made from a polyureand Yuk is the similarity of the polymeric fila-Yuk discloses that the high-melting, crystalthane, while the low-melting, amorphous seg-The main motivation for combining Barrett ments treated with the jubricating finishes.

rett lubricating finish on segmented clasio-meric polymers because of Yuk's use of the word "only" in the statement quoted above ("FPRIOR ART") that textile oils result in a satisfactory finish for segmented clasiomeric polymers "only," when employed with certain mers. However, we believe that one skilled in the art would have interpreted the word 'only" in light of the background of the above-quoted statement wherein Yuk declares that "it has been generally accepted that oils pretation that the textile oils may be used salisfactorily provided certain metal soaps are inchuded in the lubricating finish. Yuk does not teach that more additives could not be used in the lubricating finish, or that other suitable lucompositions for segmented elastomeric polycannot be used to hubricate rubber filaments because of the harmful:effect of such oils on properties." This compels an interlubricating finish and other lubricating finish the word "only" in that appellants would have one skilled in the art interpret "only" as excluding the use of other ingredients in the based upon an exclusionary interpretation of metal soaps. This argument is apparently one skilled in the art away from using the Bar-[4] Appellants argue that Yuk teaches physical

not used as emulsifiers in the Jubricating finish. Appellants' specification states that '[s]ny of the pellants' specification states that '[s]ny of the known emulsipuig agents, which are capable of dispersing the wax and textile oil in an aqueous medium to form an emulsion which is stable over exmay be employed in the practice of this invention."
No argument was made that the soaps of York are
unsuitable as enrulsifiers in the lubricating finish of Courset for appeliants emphasized at oral argument that the lubricating finish of Yuk is subment that the soaps in Yuk are stantially anhydrous and that the soaps in Yuk are tended periods of time and at elevated temperatures,

the tackiness problem and noted in his exam-ples that application of his intricating finish resulted in an oiled elastic filament showing iness was an expected rather than an unexpected regult inasmuch as Yuk was aware of tion, appellants point to the alleged unex-pected results in the suppression of tackiness However, it appears that suppression of tackbricating finish compositions could not be em-In further seeking to overcome this rejecployed for segmented clastomeric polymers. "gubstantially no tendency to stick."

ing finish of Barrett for that of Yuk. We agree with the board that the record provides no with the board that segmented elastomeric polymers for the filaments in Barrett or to substitute the lubricatbasis for believing that the lubricating finish of in view of the foregoing, we hold that it in view of the foregoing, we hold that it would have been obvious to one of ordinary Barrell cannot be applied to the segmented skill in the art to substitute Yuk's filaments of

The decision of the board is affirmed. elastomeric polymers of Yuk.

Pennsylvania Gourt of Common Pleas, Cumberland County

Pennsylvania Dutch Co., Inc. v. as amended Sept. 12, 1974 Decided Aug. 26, 1974; AMISH Co., INC., et al. PENNSYLVANIA

1. Fraud, deception and palming off UNFAIR COMPETITION (668.55)

ant's products with plaintiffs established name and reputation; all that is necessary is that defendant's conduct actually confused or that there is reasonable likelihood that average purchaser will be deceived; possibility that purchasers will be misled is not enough; while defendant may imitate plaintiff's business, it may not usurp plaintiff's investment representation, however unintencourt against use of name and trade dress depends upon proof that as a result of defendant's conduct there is a real likelihood that average purchaser will confuse defend-Right to injunction in Pennsylvania state. tional, that its product is plaintiffs. à and toil

negative the use of the Barrett lubricating finish on segmented clastomeric polymers, it should be noted that Yuk actually issued before Barrett, appellants argue that the teachings of Yuk would be interpreted by one skilled in the art to

Lestimon) ö Expert Pennsylvania Dutch Co. v. Pennsylvania Amish Co. 2. Evidence (\$36.10)

palming deception and (868,55) Fraud,

Plaintiff has burden in unfair comperition action to prove that defendant's conduct \(\frac{1}{2} \) expert testimony as to effect conductions is likely to have on average conster, or (3) relying on court's fact finding er, or (3) relying on court's fact finding ity to determine likelihood of dexption.

Plaintiff has burden in unitar conduct by action to prove that defendant's conduct by action to prove that defendant's conduct charge it by (1) proving actual confusion; he may crisifiely to cause coqfusion; he may create testimony as to effect conduct by the parties is likely to have on average conduction; it is likely to have on court's lact finding.

Absent source confusion, mere imital?

Absent source confusion, mere imital?

Absent source confusion, mere imital?

Absent source confusion, where imital is card and marks inilated are of common or als which distinguish the company from als which distinguish the company from als which distinguish the company from als which distinguish the confusion is primary significance in company from als which distinguish the product.

TRADEMARKS

4. Title — In general (867.861)

5. Names — Corporation and one of consume of similar to "Pennsylvania Dutch C similar and preight does not create in the mail and freight does not create in the mail to the penns

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